

# Soil Erodibility Factor (K)

## SIMPLIFIED



**What is K Factor?** The K Factor is an index which quantifies the relative susceptibility of the soil to sheet and rill erosion

### EQUATION

**The K Factor** equation is based on extensive field research conducted by the USDA, Agriculture Research Service and uses soil properties in the USDA Soil Survey Database

### EQUATION

**K Factor** is used in the RUSLE2 soil loss prediction equation. Values range from .02 for the least erodible soils to .64 for the most erodible

### Soil Properties used in K Factor

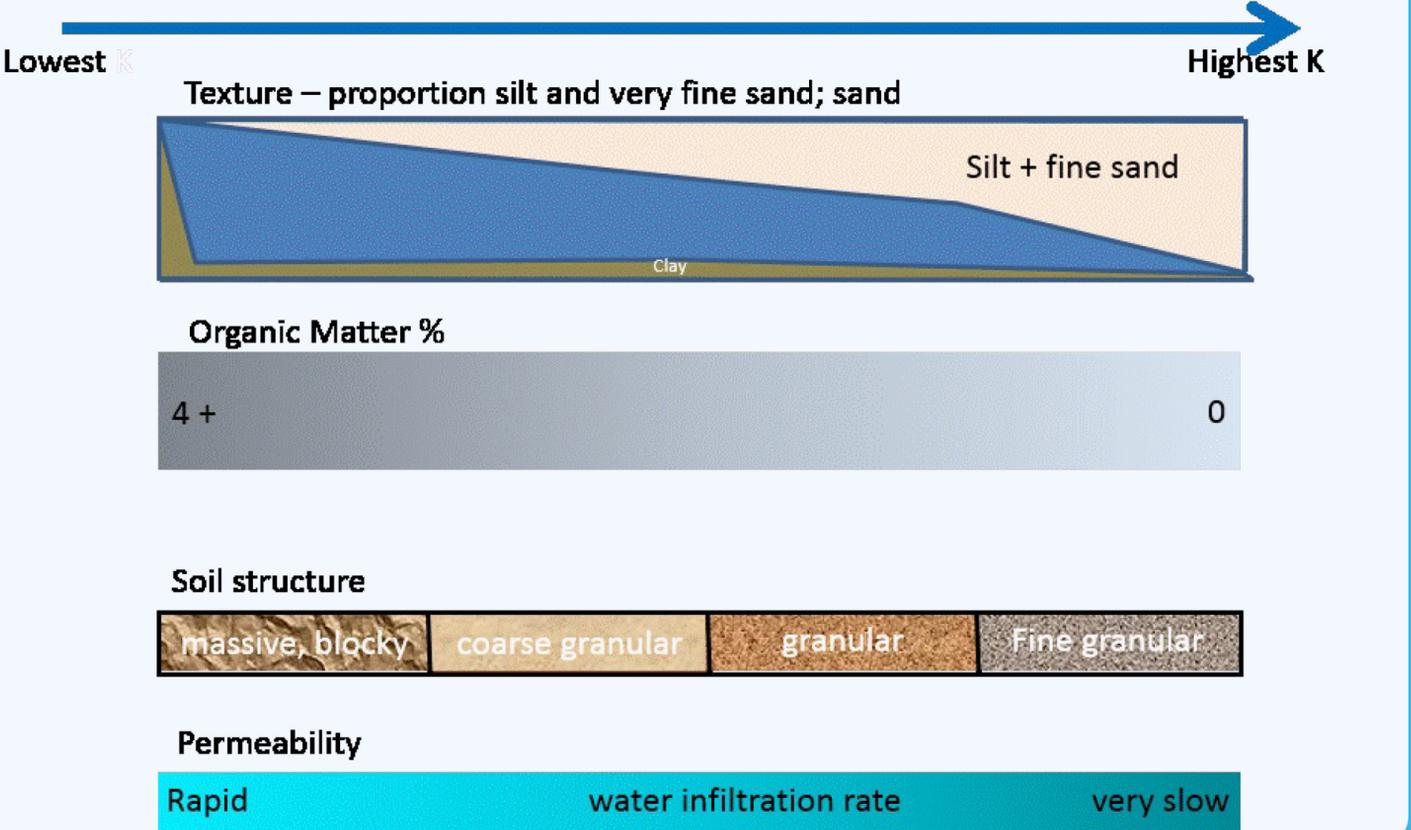
structure

Organic Matter

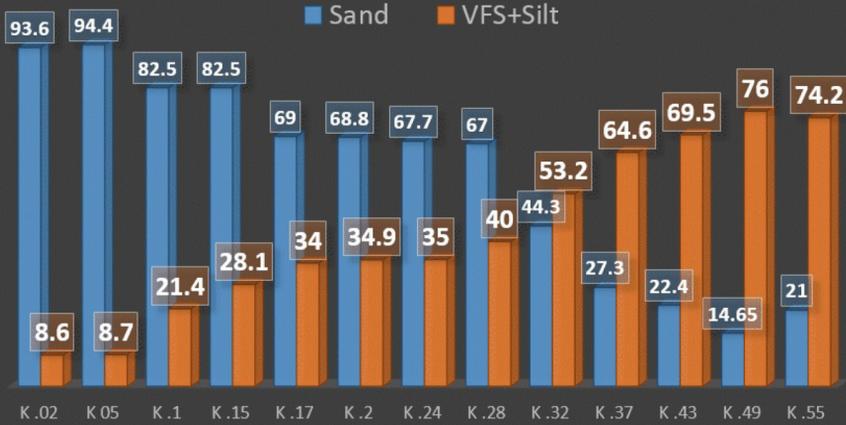
Texture

PERMEABILITY

### What Makes Soil More Erodible?



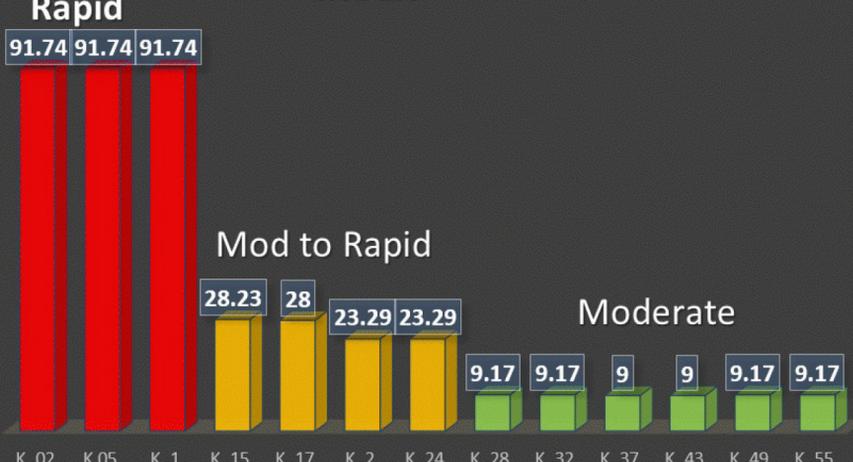
### MEDIAN TOTAL SAND VS VERY FINE SAND + TOTAL SILT BY K FACTOR INDEX



**Wisconsin** mineral soils with the lowest erodibility have greater than 90% sand and those with the highest erodibility are primarily silt and very fine sand

**Structure & Organic Matter**, while important in the K factor equation, do not have consistent trends across K factors in Wisconsin

### MEDIAN PERMEABILITY (KSAT) BY K FACTOR INDEX



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